

## **FACT SHEET**

United States Environmental Protection Agency (EPA)  
Region 10  
Alaska Operations Office,  
222 West 7th Avenue,  
Anchorage, Alaska 99513-7588

Date: November 6, 1997

Permit No.: AKS-05255-8

PROPOSED ISSUANCE OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE POLLUTANTS TO WATERS OF THE UNITED STATES PURSUANT TO THE PROVISIONS OF THE CLEAN WATER ACT (CWA) OF 1987.

### **1. NOTICE OF INTENT TO ISSUE A PERMIT.**

The United States Environmental Protection Agency, Region X has made a tentative determination to issue a permit for the discharge of storm water from the Municipal Separate Storm Sewer System (MS4) described in the application. Permit requirements are based on the Clean Water Act (33 U.S.C. 1251 et seq.), hereafter referred to as the Act, and NPDES regulations (40 CFR Parts 122 and 124).

### **2. PERMITTING AUTHORITY.**

The NPDES permitting authority is: United States Environmental Protection Agency, Region X, 1200 6th Avenue, Seattle, WA 98101.

### **3. APPLICANT.**

The Co-applicants are: Municipality of Anchorage (MOA), P.O. Box 196650, Anchorage, AK 99519-6650 and the Alaska Department of Transportation and Public Facilities (DOT&PF), P.O. Box 196900, Anchorage, AK 99519-6900.

### **4. EFFECTIVE DATES.**

The permit will become effective 30 days after the final determinations are made, unless a request for an evidentiary hearing is submitted within 30 days after receipt of the final determinations.

### **5. PUBLIC NOTICE.**

Upon publication of the public notice and this fact sheet, a 45 day public comment period shall begin. During this period, any interested persons may submit written comments on the draft permit, including the proposed storm water management program (SWMP), to the EPA Region X contact listed below. All persons wishing to comment on any condition of the draft MS4 permit, or the Director's tentative decision to issue this permit, must raise all reasonably ascertainable issues and submit all reasonable arguments supporting their position on or before the public notice expiration date. All comments should include the name, address, and telephone number of the commenter and a concise statement of comment and the relevant fact upon which it is based.

During this period any person may request a public hearing to clarify issues involved in the permit decision. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

After the expiration date of the Public Notice, the Director, Office of Water, will make final determinations with respect to the permit issuance. The tentative determinations contained in the draft permit will become final conditions if no substantive comments are received during the public notice period.

Copies of the permit and fact sheet will be available for pick-up at the EPA office in Anchorage (Room 537)

Monday through Friday between the hours of 8:00 am and 4:30 pm. Copies will also be mailed as requested in writing or by phone call to Jackie Poston at the address and phone number listed below.

In addition, the permit application and technical reference materials will be available for inspection at the EPA office at the location and times listed above.

#### **6. EPA Region X POINT OF CONTACT.**

All written comments should be addressed to Jackie Poston, U.S. EPA, 222 W. 7th Ave., Box 19, Anchorage, AK 99513-7588 or may be submitted by facsimile to (907) 271-3424.

#### **7. DESCRIPTION OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM.**

As authorized by Section 402(p) of the Act, this permit is being proposed on a system basis. The permit covers all areas within the corporate boundary of the Municipality of Anchorage (hereafter referred to as the Municipality) served by, or otherwise contributing to discharges from municipal separate storm sewers owned or operated by the applicants listed above.

#### **8. BACKGROUND INFORMATION.**

Storm water is surface water runoff that results from precipitation events. As storm water flows across land surfaces, it has the potential to pick up and carry pollutants. Under most natural conditions, storm water is slowed and filtered as it flows through wetlands and soaks into the ground, gradually recharging groundwater, and eventually seeping into receiving waters. Urbanization and development have significantly altered the course of water within the Municipality of Anchorage. Consequences of this development include loss of wetlands, elimination of vegetation, and an increased percentage of impervious surfaces, such as parking lots, roadways, and commercial, industrial, and residential structures. These built-upon surfaces reduce evapotranspiration and inhibit precipitation from infiltrating into the soil surface; thereby increasing the amount of precipitation converted to runoff. In addition, pollutants tend to accumulate on the impervious surfaces and are easily transported by storm water flows. The majority of pollution in Anchorage, as described in various reports, has been attributed to diffuse sources in historical reports on water quality. Potential sources include runoff from roads and parking lots (hydrocarbons, heavy metals, sand, deicer fluids), pesticides/fertilizers, construction sites (sediment), snow disposal sites, domestic animal waste (pathogens), and industrial facilities.

Surface runoff in Anchorage is directed into a storm drain system, which consists of a network of underground conveyances, open ditches, and/or gutters, depending on the location. This system is piped separately from the sanitary sewer system; hence the term "Municipal Separate Storm Sewer System." Section 402(p) of the Clean Water Act (CWA) and related federal regulations (40 CFR 122.26) recognize the pollutant contribution of urbanized areas and require NPDES permits and storm water quality management programs for storm water discharges from medium and large municipalities (those serving a population of greater than 100,000) such as Anchorage.

The CWA recognizes the difficulties inherent in attempts to meet numeric standards and requires that this type of permit achieve a reduction, to the maximum extent practicable (MEP), of pollutants discharged from the MS4. The co-applicants, State of Alaska Department of Transportation and Public Facilities (DOT&PF) and the Municipality of Anchorage (MOA), are responsible for reviewing pollutant sources and activities throughout the municipal area and implementing a comprehensive storm water management program (SWMP) as described in this draft permit and the associated permit application.

#### **9. DISCHARGES AUTHORIZED BY THIS PERMIT.**

- a. **Storm Water.** This permit authorizes all existing or new storm water point source discharges to waters of the United States from the Municipal Separate Storm Sewer System (MS4).
- b. **Non-Storm Water.** This permit does authorize the discharge of storm water commingled with flows contributed by process wastewater, non-process wastewater, or Storm Water Associated with Industrial Activity **provided** such discharges are authorized under separate NPDES permits. In addition, certain types of non-storm waters listed in 40 CFR 122.26(d)(2)(iv)(B)(1) are allowable if they are not sources of

pollution to the waters of the United States.

Because of the difference in the statutory requirements, and the fact that the Act does not exempt Storm Water Associated with Industrial Activity from the requirement to obtain a separate NPDES permit, these storm water discharges cannot be authorized by the MS4 permit. Such discharges require a separate NPDES permit. However, the permittees are responsible for the quality of the combined discharge, and have a vested interest in locating uncontrolled and unpermitted illicit and industrial storm water discharges.

- c. **Spills.** This permit does not authorize discharges of material resulting from a spill. If discharges from a spill are necessary to prevent imminent threat to human life, personal injury, or severe property damage, the permittees have the responsibility to take (or insure the responsible party takes) reasonable and prudent measures to minimize the impact of discharges on human health and the environment.

#### **10. RECEIVING STREAM SEGMENTS AND DISCHARGE LOCATIONS.**

This permit covers all discharges into water bodies located in the 27 watersheds defined by the co-permittees within the Municipality of Anchorage. These are mapped in Part I of the permit application and attached hereto as Figure 1. The waters receiving discharges from the MS4 include the Eklutna River, Edmonds Creek, Mink Creek, Mirror Creek, Peters Creek, Fire Creek, Eagle River, Meadow Creek, South Fork Eagle River, Ship Creek, Chester Creek, North Fork Chester Creek, Middle Fork Chester Creek, South Fork Chester Creek, Fish Creek, Campbell Creek, North Fork Campbell Creek, South Fork Campbell Creek, Little Campbell Creek, Craig Creek, Hood Creek, Furrow Creek, Hood Creek, Little Survival Creek, Rabbit Creek, Little Rabbit Creek, Potter Creek, Bird Creek, Indian Creek, and Glacier Creek, and tributaries and associated lake systems, as outlined in the application. The discharges are located on those waters in the Municipality of Anchorage (MOA), Alaska. The designated uses of the receiving streams include drinking water, primary and secondary recreation, and aquatic uses.

#### **11. BASIS FOR PERMIT CONDITIONS.**

- a. **Statutory basis for permit conditions.** The conditions established by this permit are based on Section 402(p)(3)(B) of the Act which mandates that a permit for discharges from MS4s must: effectively prohibit the discharge of non-storm water to the MS4; and require controls to reduce pollutants in discharges from the MS4 to the maximum extent practicable (MEP) including best management practices (BMPs), control techniques, and system design and engineering methods, and such other provisions determined to be appropriate. MS4s are not exempt from compliance with Water Quality Standards. Section 301(b)(1)(C) of the Act requiring that NPDES permits include limitations, including those necessary to meet water quality standards, applies. The intent of the permit conditions is to meet the statutory mandate of the Act.

As authorized by 40 CFR 122.44(k), the permit will be utilizing BMPs as part of a comprehensive SWMP, as the mechanism to implement the statutory requirements. Section 402(p)(3)(B)(iii) of the Act clearly includes structural controls as a component of the MEP requirement. The EPA has encouraged permittees to explore opportunities for additional pollution prevention measures, while reserving the more costly structural controls for higher priority watersheds, or where pollution prevention measures are not feasible or are ineffective.

- b. **Regulatory framework for permit conditions.** As a result of the statutory requirements of the Act, the EPA promulgated the MS4 Permit application regulations, 40 CFR 122.26(d). These regulations describe in detail the permit application requirements for operators of MS4s. The information in the application (Parts 1 and 2) was utilized by the EPA to develop the permit conditions and determine permittee status in relationship to these conditions.
- c. **Basis for permit conditions.** In addition to information contained in the proposed SWMP submitted in the permit application in May of 1992 (Part I) and May of 1993 (Part II), and the subsequent MOA Watershed Program Summary submitted in January of 1997, EPA consulted with the Co-permittees (MOA and DOT/PF) and the Alaska Department of Environmental Conservation (ADEC) on issues

related to permit conditions specific to the Municipality of Anchorage. Representatives of the aforementioned agencies met regularly, between February and July of 1997, in a facilitated manner to increase the understanding of the respective agencies and to derive a well-thought out, reasonable approach to storm water management and related permit requirements. Several sub-groups were formed, as necessary to focus on specific issues, resulting in recommendations to the full working group. Additional preliminary measures were taken to involve the public prior to the formal comment period. Serious consideration was given to comments received during two stakeholder meetings held June 19 and 24, 1997. As a result, several public comments were incorporated into conditions in this draft permit and many suggestions were received that will be useful in the implementation phase of various SWMP elements and will be among the topics covered in the annual meetings as required by the draft permit.

d. **Discharge goals and limitations.**

1. *Discharge goals:* The following goals apply to discharges from MS4s and were considered in review of the SWMP and in preparation of the draft permit. In implementing the SWMP, the permittees are required to aspire to these goals. The goals are included to further define the intent of the permit.

*No discharge of toxics in toxic amounts.* It is national policy that the discharge of toxics in toxic amounts be prohibited (Section 101(a)(3) of the Act).

*No discharge of pollutants in quantities that would cause a violation of state water quality standards.* Section 301(b)(1)(C) of the Act and 40 CFR 122.44(d) require that NPDES permits include "...any more stringent limitations, including those necessary to meet water quality standards, treatment standards, or schedule of compliance, established pursuant to state law or regulations..." Implementation of the SWMP is reasonably expected to provide for protection of state water quality standards.

*No discharge of floatable debris, oils, scum, foam, or grease in other than trace amounts.*

*No discharge of non-storm water from the municipal separate storm sewer system, except in accordance with Part I.B.2.* Permits issued to MS4s are specifically required by Section 402(p)(3)(B) of the Act to "...include a requirement to effectively prohibit non-storm water discharges into the storm sewers..." The regulation (40 CFR 122.26(d)(2)(iv)(B)(1)) allows the permittee to accept certain non-storm water discharges where they have not been identified as sources of pollutants. Any discharge subject to its own NPDES permit is not subject to the ban on non-storm water.

*No degradation or loss of state-designated beneficial uses of receiving waters as a result of storm water discharges from the municipal separate storm sewer (unless authorized by the ADEC in accordance with the State's antidegradation policy).*

2. *Discharge Limitations:* No numeric limitations are proposed at this time. In accordance with 40 CFR 122.44(k), the EPA has required a series of Best Management Practices, in the form of a comprehensive SWMP, in lieu of numeric limitations. Numeric limitations may be included in the final permit, if required by the ADEC, as a condition for certification of the permit under Section 401 of the Act.

**12. STORM WATER MANAGEMENT PROGRAM.**

The SWMP submitted by the permittees was required to contain program elements for each of the items in Table A. The following summarizes the SWMP elements submitted by the Municipality of Anchorage and the Alaska Department of Transportation and Public Facilities to satisfy the requirements. Where elements were deemed by the EPA to require augmentation, or where significant submittals were indicated in the SWMP, schedules were included in Part III of the permit. Table III. A. of the permit details compliance deadlines for program elements of

the storm water management plan.

**Table A - Storm Water Management Program Elements**

Required Program Element	Permit Parts	Regulatory References (40 CFR 122.26)
Structural Controls	II.A.1.	(d)(2)(iv)(A)(1)
Areas of new development & significant redevelopment	II.A.2.	(d)(2)(iv)(A)(2)
Roadways	II.A.3.	(d)(2)(iv)(A)(3)
Flood Control Projects	II.A.4.	(d)(2)(iv)(A)(4)
Pesticides, Herbicides, & Fertilizers Application	II.A.5.	(d)(2)(iv)(A)(6)
Illicit Discharges and Improper Disposal	II.A.6.	(d)(2)(iv)(B)(1)-(5), (iv)(B)(7)
Industrial and High Risk Runoff	II.A.7.	(d)(2)(iv)(C), (iv)(A)(5)
Construction Site Runoff	II.A.8.	(d)(2)(iv)(D)
Public Education	II.A.9.	(d)(2)(iv)(A)(6), (iv)(B)(5), (iv)(B)(6)
Monitoring Program	II.A.10.	(d)(2)(iv)(B)(2), (iii), (iv)(A), (iv)(C)(2)

- a. Structural Controls:** *The MS4 and any storm water structural controls shall be operated in a manner to reduce the discharge of pollutants to the Maximum Extent Practicable.*

Structural controls are devices which aid in removal or reduction of pollutants that are transported in storm water prior to runoff to receiving water bodies. A variety of structural controls are currently in operation within the watersheds located within the permit boundaries. Some are owned and operated by the MOA and others by DOT&PF. They consist of approximately 129 oil and grit separators, 11 sedimentation basins, six (6) storm drain by-pass structures, one retention basin, one wetland storm water treatment system, and other types of controls which may, in some cases, exist in combination with facilities such as snow disposal sites. It is becoming routine to incorporate structural controls, as appropriate, in conjunction with increased development of residential, commercial, and industrial areas and roadways.

While the MOA and DOT&PF currently practice inspection and maintenance of structural controls, the permit requires the co-permittees to submit a definitive plan for future routine inspections and maintenance which will provide details on the scheduling of inspections, inspection criteria, and corresponding maintenance activities. Both permittees will maintain a record of these activities and will submit this record annually.

In addition to the maintenance of structural controls, the MOA currently operates a litter control program and promotes voluntary storm water system and drainage ways maintenance. Litter control, designed to control floatable materials available for transport into waterways, consists of trash collection from municipal lands such as parks and along roadways, with greatest emphasis after breakup and in the summer months. Additional cleanup of drainage ways is accomplished periodically through local volunteer efforts such as Anchorage Creek Cleanup and the Adopt-A-Highway program.

The permit also includes a requirement to perform assessments to determine the effectiveness of structural and source controls. Since the permittees have already invested considerable effort in this area, EPA believes it is wise to build on existing studies, refining the focus, as applicable. Assessments will evaluate oil and grit separators, sedimentation basins, storm water treatment in wetlands, non-structural (preventive) controls, and stream sediment characterization. While a brief overview is provided in

Attachment “A” of this permit, permittees will be submitting detailed descriptions of the assessments within 90 days after the effective date of this permit. These descriptions will be reviewed by EPA and ADEC and will be a topic addressed at the first, and subsequent, annual meetings.

EPA anticipates that this program element will produce information on the effectiveness of such controls that will influence the design, redesign, siting, inspection, and maintenance of new and existing structures.

- b. **Areas of New Development and Significant Redevelopment.** *A comprehensive master planning process (or equivalent) to develop, implement, and enforce controls to minimize the discharge of pollutants from areas of new development and significant redevelopment after construction is completed.*

EPA believes that an innovative approach to new development is perhaps the most critical step local managers can take to control the negative impacts of urban growth on water quality and general watershed health. Impervious surface coverage has become a recurring theme in urban watershed protection planning nationwide. It is of particular importance to Anchorage in that studies in the Pacific Northwest have demonstrated low level sensitivities of salmon and trout to this variable. [Schueler 1994]

Urbanization typically involves replacement of vegetation with impervious surfaces such as roadways, roofs, and parking lots, as well as occasional channelization of streams and filling of wetlands. While these surficial changes serve to enhance the ability of the storm drain system to efficiently and quickly transport storm water and snow melt (mitigating flooding), they are also responsible for adverse changes to the hydrology, habitat structure, water quality, and biodiversity of aquatic life in affected watersheds. The percentage of impervious surface area has emerged as a powerful environmental indicator of aquatic systems.

Studies examining the relationship between urbanization and stream quality have demonstrated significant degradation beginning to occur at about 10% imperviousness. [Schueler 1994] Medium density single family housing can be as high as 60%; or much lower through strategic land use planning. [Schueler 1994] It is important to note the threat this poses to the salmonid fish species present in Anchorage streams. Salmon and trout appear to be most negatively impacted by imperviousness. [Luchetti, G. And R. Fuerseburg, 1993. Relative fish use in urban and non-urban streams. Proceedings. Conference on Wild Salmon. Vancouver, British Columbia.] This is notable since a public survey, solicited by the Ship Creek Citizen Advisory Task Force, indicates the number one use of Ship Creek, the largest stream running through the Anchorage Bowl, is *fishing* and nearly 100% of all respondents felt it very important to *protect and enhance fish habitat and ability for fish to migrate*. [Ship Creek Survey results 4/24/97.] The percentage of impervious surface area in the Chester Creek, lower Campbell Creek, Fish Creek, and lower Ship Creek watersheds far exceeds the 10% level and is estimated to range up to 60 - 70% in some subwatershed areas. It is also imperative that there be an awareness of the potential significance of upstream development, in otherwise pristine sub-watersheds, on downstream watershed health.

#### Prevention via Land Use Controls

Effectiveness of the overall SWMP will certainly be ensured with complimentary, locally-supported sub-watershed development plans that include attempts to quantify, manage, and control impervious surface coverage. Since the issuance of this permit coincides with a revision of the Anchorage Bowl Comprehensive Development Plan, the MOA will be required, during the revision process, to consider adoption of additional policies and incentive programs as measures to minimize the negative ecological impacts of urban growth and it's storm water collection system. The MOA is encouraged to initiate and implement programs to improve water quality such as (1) instituting a setback requirement buffering lake systems, (2) offering incentive programs to land-owners for dedication of greater than 25 foot setbacks from streams on newly developed properties (or equivalent option for existing structures) or (3) for retention of a minimum of 25% (or to the maximum extent possible) of the native vegetation on developing acreage, and (4) adopting requirements for permitting of land-clearing activities.

Because the Anchorage Bowl area is experiencing a shortage of developable land, land owners are facing increasing restrictions and impositions on how and where they can build. EPA recognizes the difficult and sensitive nature of what could be construed as additional limitations on development. In light of this, it is the intent of EPA to issue this permit with directives that allow for as much flexibility in this area as possible. Proactive solutions resulting from this effort by the MOA will preclude the need for special permit conditions imposed by EPA in the future.

In addition, it is expected that the MOA will continue to adhere to, and enforce, land use regulations (Title 21 of the Anchorage Municipal Code) and be no less stringent than policies and management strategies in the current Anchorage Wetlands Management Plan.

#### Post-construction BMP requirements

Since post-construction design decisions affect ecological processes; this permit specifically focusing on those associated with storm water and runoff; projects classified as new development or significant redevelopment shall remain subject to a plan review in conjunction with permitting. Current MOA land use regulations consider sediment and erosion control measures for development. At the present time, ADEC is conducting these reviews to ensure that proposed BMPs will adequately address storm water pollutant control at the source during and after construction. Standards for storm water management and guidelines for BMPs can be found in the MOA Design Criteria Manual adopted in 1988 and the Erosion and Sediment Control Plan Guidelines. The MOA will be responsible for continuation of this program, either in a position of direct implementation or oversight.

EPA believes that preventive measures and source controls implemented through definitive development criteria are essential elements of a successful program. A program relying solely on storm water treatment through BMPs, monitoring, and education will fall short of reversing the effects of runoff on Anchorage water bodies. It is anticipated that the short-term costs associated with the protection of these valued resources will result in long-term economic and environmental gain.

- c. **Roadways:** *Public streets, roads, and highways shall be operated and maintained in a manner to minimize discharge of pollutants, including those pollutants related to deicing or sanding activities.*

This program element addresses operation and maintenance of public streets, roads, and highways in Anchorage and the related management practices of deicing, sanding, street sweeping, and snow disposal. Each permittee is responsible for the management of the roadway associated with the storm drain system they own and operate; MOA 1,538 miles, and DOT&PF 1,320 miles. Street sanding, deicing, and snow removal are undertaken to ensure safe transportation routes in the Municipality during winter conditions. Though sand was traditionally mixed with salt to increase traction and melt ice, it has become more common to pre-wet sand with chemical deicers that also act as anti-clumping agents and corrosion inhibitors. It is the intent of this permit to ensure that these practices do not have a negative impact on water quality in Anchorage streams. Snow buildup on roadways and parking areas is also removed and transported to disposal sites. There were eleven publicly-owned snow disposal sites reported in Part One of the permit application.

#### Application of Chemical Deicers

MOA currently applies chemical deicer (magnesium chloride) to roadways in the Central Business District (downtown) while DOT&PF mixes magnesium chloride with salt as a pre-wetting agent to sand in a broader geographical area. The MOA is currently completing a study of the overall effects of chemical deicer application on the quality of Anchorage streams and their ability to support aquatic life and other uses. Recommendations and conclusions will be included in the deicer impacts assessment submitted to EPA and shared with DOT&PF for future coordination of deicer application.

#### Sanding Practices and Street Sweeping

Sand is applied to Anchorage roadways by MOA and DOT&PF seasonally to improve the safety of driving

conditions. Both agencies partake in street sweeping to remove as much accumulation as possible. Nonetheless, a percentage of this particulate matter along with street pollutants such as debris, heavy metals, and oils and grease from vehicular traffic, washes into the storm drain system and ultimately discharges into Anchorage waterways. The MOA has initiated a study of the street sand application, accumulation, and removal practices. A copy of this study will be submitted to EPA and recommendations for modifications to the existing program will be shared with DOT&PF and incorporated in management techniques.

#### Snow Disposal

By nature, snow removal is not limited to clean, freshly fallen snow; accumulation of snow on roadways also includes a combination of potential pollutants. A recent study performed for DOT&PF revealed that snow and meltwater from snow disposal sites in Anchorage and Fairbanks contained concentrations of copper, iron, cadmium, and lead at levels near or above the maximum contamination levels (MCLs) specified by Alaska's Water Quality Criteria for Toxic Substances in Freshwater. [Behr-Andres 1996] Hence the need for properly designed disposal facilities that incorporate BMPs to reduce the pollutant runoff to the MEP.

Permittees will develop a snow disposal policy which will address applicable BMPs, siting criteria, inspection, and maintenance activities. Permittees are encouraged to build on findings from previous studies, such as Water Quality Effects of Snow Storage Areas [Behr-Andres 1996] and the Snow Disposal Site Selection Study [Montgomery Watson 1993]. This policy shall include guidelines applicable to both public and privately-owned facilities. However, during this permit term, it is expected that all publicly-owned sites are brought into compliance with the policy standards first, while providing targeted education to private owners. Although, the MOA is obligated to respond and follow up on reports of improper practices that take place at privately-owned facilities under the Industrial and High Risk category of this permit; it may be necessary to include requirements for MOA inspection of private facilities in the future. In addition to the plan review of all new snow disposal sites (also addressed in the section of New Development and Significant Redevelopment), a public review will continue to accompany proposed publicly-owned facilities.

EPA believes that the assessments will provide an increased understanding of the impacts of the sand and deicing agents applied to roadways and will influence managerial decisions within MOA and DOT&PF regarding their application and management in terms of quantity, type, location, storage, and removal. MOA and DOT&PF will focus on their existing snow disposal sites as a priority for implementation of the snow disposal policy which they will be submitting to EPA during this permit term. EPA anticipates that once the publicly-owned facilities are designed and operated according to the forthcoming policy and all applicable codes, the MOA can then reallocate resources to focus on privately-owned facilities. During this permit term, the thrust on private facilities will take the form of supplying education and guidance to owners as well as responding appropriately to suspected violations.

- d. **Flood Management Projects:** *Impacts on receiving water quality shall be assessed for all flood management projects. The feasibility of retro-fitting existing structural flood control devices to provide additional pollutant removal from storm water shall be evaluated.*

#### Project Review

Runoff and other potential impacts, such as erosion and loss of riparian habitat and floodplain function, are some of the concerns associated with developments located in close proximity to waterways. Throughout the permit term, the permittee shall review projects proposed for construction and development in flood hazard areas to ensure the impact of these projects on water quality has been adequately addressed. Chapter 21.60 of the Anchorage Municipal Code identifies the requirements and restrictions that apply to the regulatory floodway and floodway fringe boundaries. It should be noted that although golf courses are listed under permitted uses and structures, members of the public expressed opposition to this allowance at the June 19, 1997 stakeholder meeting, due to potential runoff of pesticides and fertilizers and loss of native vegetation. It is incumbent on MOA to seriously reconsider the types of



permitted uses and structures that are allowed during the flood hazard review of the building permit process.

#### Floodplain Maps

Flood hazard district maps created by the Federal Emergency Management Agency (FEMA) within the Municipality of Anchorage have not been completely updated to reflect the effects of the storm drain system, impervious surface coverage, or the channelization of waterways; nor do they include coverage of outlying areas that are currently experiencing rapid growth and development. AMC 21.60.020 calls for a mandatory update and review of existing flood hazard district maps. This permit requires MOA to (1) prioritize and submit to FEMA a list of critical areas that have yet to be mapped and to (2) determine the status of compliance with the mandatory five year update and review of existing maps.

EPA feels that the existing flood hazard review process supplies the mechanism for proper review of proposed projects to be located in floodplain boundaries. The MOA is required to consider the potential impacts of such proposals on water quality and the ability of the receiving water to support its beneficial uses. While this will take place regardless of whether or not the area is mapped, it would be advantageous to have updated maps as reference early in the planning stages and in the flood hazard review.

- e. **Pesticide, Herbicide, and Fertilizer Application:** *The permittee shall implement controls to reduce the discharge of pesticides, fertilizers, and insecticides to the MS4.*

Pesticides are substances that prevent, destroy, control, repel, or mitigate any pest, including substances used as plant regulators, desiccants or defoliants. [ADEC Pesticide Program Fact Sheet] Pests include rats, insects, birds, spiders, nematodes, snails and slugs, fungi, weeds, bacteria and viruses, and many other living organisms that injure or annoy humans, their pets, and/or their homes. While agriculture does not dominate the landscape in the Municipality of Anchorage, pesticides and fertilizers are frequently used by homeowners as well as small numbers of farmers and commercial and industrial businesses.

ADEC has been granted delegation by EPA to implement the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and has adopted state pesticide control regulations - 18 AAC 90. The ADEC has the authority to regulate the sale, distribution, use and disposal of pesticides in Alaska. The state program also operates a toll free number as a service to Alaskans, in addition to providing training and certification for pesticide applicators using restricted-use pesticides and applicators using any class of pesticides for “commercial” purposes. The Alaska Cooperative Extension Service (ACE) offers assistance in outreach and training.

Municipal pesticide regulations can be found in AMC Title 15.75. Most notably, this chapter requires permitting of businesses who apply pesticides or broadcast chemicals in the Municipality, as well as noticing requirements to inform contiguous properties.

Due to the focus of ADEC and the MOA regulations on commercial applicators, a gap has developed with regard to homeowners and private businesses who apply pesticides and/or fertilizers on their own properties. This provides the basis for inclusion of the pesticide, fertilizer, and herbicide program elements in the SWMP. The permittees will collect information to increase their understanding of the quantities and types of pesticides and fertilizer applied by this user group (non-commercial applicators). This will lead to identification of water bodies most likely to be impacted by pesticide and/or fertilizer runoff. These water bodies will then undergo field screening and further analysis, if warranted. A vital component will be outreach in which the permittees will work in conjunction with ADEC and ACE in distribution of educational materials to targeted audiences. It should be noted that input through this permitting process has revealed public concerns with pesticide and fertilizer usage and runoff associated with golf courses.

EPA believes that gaining a better understanding of the use and use patterns of pesticides and fertilizer within the Municipality will provide the framework for a strategic outreach program to inform users of

proper application and labeling requirements. Water bodies identified as potentially impacted will be screened for impacts and follow up investigation and targeted outreach will accompany the effort should contaminants be found.

- f. Illicit Discharges and Improper Disposal:** *An ongoing program to detect and eliminate illicit connections and discharges and improper disposal into the MS4. Non-storm water discharges shall be effectively prohibited. However, certain discharges are not prohibited and are listed in 40 CFR 122.26(d)(2)(iv)(B)(1). The SWMP shall identify any allowed non-storm water discharges, along with any conditions placed on discharges. The discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, and animal wastes into the MS4 shall be prohibited. The permittees shall ensure the implementation of programs to collect used motor vehicle fluids (at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal.*

*A program to locate and eliminate illicit discharges and improper disposal into the MS4 shall be implemented. This program shall include dry weather screening activities to locate portions of the MS4 with suspected illicit discharges and improper disposal. Follow-up activities to eliminate illicit discharges and improper disposal may be prioritized on the basis of magnitude and nature of the suspected discharge; sensitivity of the receiving water; and/or other relevant factors. This program shall establish priorities and schedules for screening (described in Part II.A.11.a. and b.) the entire MS4 at least once per five years. Facility inspections may be carried out in conjunction with other permittee programs (pretreatment inspections of industrial users, health inspections, fire inspections, etc.), but must include random inspections of facilities not normally visited by the permittee.*

*Each permittee shall require the elimination of illicit discharges as expeditiously as possible and the immediate ending of improper disposal practices upon identification of responsible parties. Where elimination of an illicit discharge within thirty (30) days is not possible, the permittee shall require an expeditious schedule for removal of the discharge.*

*A program to prevent, contain, and respond to spills that may discharge into the MS4 shall be implemented. The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the permittees' jurisdiction.*

#### Prevention

Illicit discharges and improper disposal to the MS4 are prohibited by Anchorage Municipal Code. Several local ordinances governing these discharges are AMC Title 15 (Environmental Health), Title 16 (Hazardous Materials), Title 26 (Sewer Service), the Uniform Plumbing Code, and the Uniform Fire Code. Illicit discharges and improper disposal can be persistent or episodic. Examples of such include (illegal) connections of the sanitary sewer system to the storm sewer system and disposal of hazardous material such as oil or paint into surface waters or the storm drain system. The permittees will continue to adhere to regulations prohibiting illicit discharges and improper disposal while expanding their existing program throughout the permit term.

#### Public Education and Reporting

Because the effectiveness of this program will rely on the cooperation of diverse individuals and businesses, education and outreach will play a prominent role in the SWMP. This program will provide information on disposal and storage options to individuals and businesses and will promote public reporting of suspected discharges. Public involvement will be facilitated through the installation and maintenance of a central hotline number established to accept reports regarding drainage and pollution or improper disposal, as well as other water quality issues. The MOA will assume responsibility for following up on legitimate reports in an appropriate and timely manner. The annual reports to EPA will include a summary of these reports and follow up activities.

#### Ongoing Field Screening and Investigation of Suspected Discharges

Continued vigilance of the MS4 shall take the form of visual inspections and chemical analysis according to the monitoring plan. Visual inspections of major outfalls will be performed during years one and five of the permit term. Major outfalls are defined as a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for pipes draining areas zoned for industrial use, a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

Characterization conducted in 1992 by the MOA during the permit application process found dry weather flow at 107 of 147 such outfalls. Discharges were screened for flow, pH, conductivity, detergents, chlorine, phenols, and copper. Forty-five outfalls exhibited measurable levels of one or more of these parameters. Upon further examination, many of the discharges have been potentially linked to groundwater infiltration due to the similarities of the constituents (namely copper and conductivity levels) with Anchorage groundwater. The monitoring plan calls for further scrutiny, chemical analysis, and appropriate follow up of these and all other legitimate suspected discharges.

The Municipality's illicit discharge, illicit connection, and illegal dumping program will require parties who are responsible for such actions to demonstrate to the Municipality an acceptable corrective procedure for removing the discharge. The program includes the provision for legal action based on existing ordinances and codes. A summary of the investigations and conclusions that take place will accompany the annual reports to EPA.

#### Spill Prevention and Response

The permittee shall continue current programs aimed at spill prevention and response. These programs include, but are not limited to, the Hazardous Materials Response Team of the Anchorage Fire Department, the "Orphan" Drum Program, the Community-Right-to-Know Program which details facilities handling or storing hazardous materials and hazardous wastes, and an Emergency Operations Plan for Hazardous Materials Emergencies. The permittee shall review the existing spill response, containment and prevention program to ensure that it adequately addresses the issue of spills to the MS4 and shall include a brief summary of spill response actions in its annual report.

EPA agrees that community education is a crucial element in efforts to prevent and reduce illicit discharges and improper disposal to the MEP. It has been shown that the majority of Anchorage residents are not aware that the gutters and other conveyances act as funnels to transport and discharge water into local waterways. Increasing the awareness of individuals and businesses should be the first step in a proactive approach. Continued field screening will aid in pinpointing potential sources of pollution which will then be subject to appropriate action to eliminate the source.

- g. Industrial and High Risk Runoff:** *A program to identify and control pollutants in storm water discharges to the MS4 from municipal landfills; other treatment, storage, and disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, or disposal and recovery facilities and facilities that are subject to SARA Title III, Section 313; and any other industrial or commercial discharge the permittee determines are contributing a substantial pollutant loading to the MS4 shall be implemented. The program shall include inspections, a monitoring program, and a list of industrial storm water sources discharging to the MS4 shall be maintained and updated as necessary.*

The percentage of industrial and high risk facilities is relatively low; such facilities could include landfills, manufacturers, seafood processors, mining, etc. The management approach to control industrial and high risk runoff is similar to that for control of illicit discharges and improper disposal. The MOA will be expanding their database of industrial and high risk facilities to include all sites that have the potential for contributing pollutants to the MS4 through storm water discharges. There are presently four wastewater treatment plants operating under an EPA NPDES permit, about 150 permitted industrial facilities, and

approximately 2,500 additional businesses listed by MOA in part two of their permit application. There is currently one open landfill and four closed landfills within municipal boundaries.

#### Outreach

The permittees will develop educational materials that target various types of industries. Categories may include, but are not limited to, auto repair shops, gas stations, snow disposal sites, transportation facilities, and food processing plants. The information may be packaged as brochures, posters, videos, etc. Copies of these materials will be sent to EPA as part of the annual reporting requirements.

#### Investigation of Wrongful Discharge

The catalog of high risk facilities can be cross-referenced with GIS data, and other information, to aid in establishing a connection to findings resulting from the monitoring program. The overall monitoring program prioritizes four water bodies (Campbell Creek, Chester Creek, Ship Creek, and Rabbit Creek) for evaluation of chemical parameters during this term of the permit. Based on land use estimates provided in part one of the permit application, the Ship, Chester, and Campbell Creek watersheds contain the highest percentage of commercial and industrial properties within the municipality. The permittees will be establishing procedures to investigate suspected discharges and, as dischargers are identified, the MOA will initially provide guidance in an attempt to gain voluntary compliance. Facilities who hold, or are required to hold, NPDES permits and fail to cooperate, will be referred to the permitting agency for enforcement follow-up. The permittees will be responsible for tracking the referrals to ensure appropriate measures are taken.

EPA believes that the potential for industrial and high risk runoff is relatively low in Anchorage when compared to many medium municipalities in the lower 48 states due to the lower occurrence of large industrial facilities. A combination of education, monitoring, and industrious follow up should serve as a multi-faceted approach to ensure long-term reductions of storm water runoff from industrial sources.

- h. Construction Site Runoff:** *A program to reduce the discharge of pollutants from construction sites shall be implemented. This program shall include: requirements for the use and maintenance of appropriate structural and nonstructural control measures to reduce pollutants discharged to the MS4 from construction sites; inspection of construction sites and enforcement of control measures requirements; appropriate education and training measures for construction site operators; and notification of appropriate building permit applicants of their potential responsibilities under the NPDES permitting program for construction site runoff.*

Existing MOA regulations governing the control of runoff from construction sites are found in AMC Titles 21 and 23 which allow the MOA to regulate the use and development of land. This permit builds on the management program currently in place by the MOA, run in coordination with ADEC. The following segments describe this permit element.

#### Storm Water Quality Control Plans

The MOA and ADEC have complimentary regulations requiring Storm Water Quality Pollution Prevention Plans (similar requirements refer to a Storm Water Pollution Prevention Plan in the general permit for storm water associated with construction activities issued by EPA). The MOA Department of Public Works adopted the Design Criteria Manual in 1988; this contains guidance on BMPs for reduction of flooding, erosion, and adverse water quality impacts. The Erosion and Sediment Control Guidelines, an accompaniment, specifically addresses these types of controls and provides step-by-step details on the plan requirements and review process. All construction projects within the municipality must be prefaced by a Storm Water Pollution Prevention Plan encompassing erosion and sediment controls. These plans must address erosion and sediment control both during the construction and post construction phases. Although the plan review is presently being undertaken by ADEC, the permit holders still retain the responsibility of ensuring that the terms of this permit are met. Independently negotiated agreements, such as that with ADEC, are allowable means for leverage of the limited MOA and DOT&PF resources. The permittees will submit a description of the review and approval process, an explanation of the criteria

and standards by which plan reviews are judged, and a scheme for technical and procedural staff training.

It is important to note the overlap resulting from the various local, state, and federal permit requirements a singular project may be subject to. Permits with applicability to water quality may include: Flood Hazard Permits (MOA DPW), Section 404 (wetlands) (U.S. Army Corps of Engineers), Coastal Management Consistency Determinations (Division of Governmental Coordination), Title 16 Fish Habitat Permits (ADF&G), Discharge Permits (ADEC), Resource Use Permits (ADNR), and the NPDES general permit for storm water associated with construction activities (minimum 5 acre disturbance) (U.S. EPA).

#### Structural and Non-Structural BMPs

MOA and DOT&PF will be continually updating the compilation of BMPs as knowledge is gained and additions, deletions, or modifications are necessary. The goal is to provide up to date information to public and private parties seeking guidance on BMP selection, maintenance, installation, and/or implementation.

#### Procedures for Site Inspection and Enforcement

The permittees will be submitting and implementing an inspection and enforcement strategy for sites undergoing construction to guarantee compliance with the approved plan and ensure that all pollution sources have been addressed. The strategy will also include plans for training of staff who will be conducting the inspections and enforcement actions.

#### Training and Education for Construction Site Operators

MOA and DO&PF will develop training designed specifically for those involved in the design or implementation of construction projects, such as operators and developers. This should help simplify the procedural requirements as well as providing education on BMP selection, installation, implementation, and maintenance.

EPA believes that the individual and combined efforts of the MOA and DOT&PF in this program area, with each other and with ADEC, will help to streamline the management of construction site runoff and present a more uniform set of requirements to the regulated community (which in some cases includes DOT&PF). Public input during this permitting process highlighted the need for improved public education, simplification of the permitting and plan review process, and the need to take this from the office to the field in the form of inspections and enforcement, as necessary. As construction site operators and developers comply with this program element and understand and incorporate appropriate BMPs into the project designs, storm water runoff impacts will be reduced to the MEP.

- i. **Public Education:** *A public education program with the following elements shall be implemented: (a) a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials into the MS4; (b) a program to promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes; and © a program to promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors.*

Public education and involvement have been recognized by the MOA as a critical element in the reduction of pollutant loadings in storm water runoff. Logic dictates that because a great deal of these pollutants are generated from everyday activities (driving, home building, depositing of domesticated animal waste, and gardening with pesticide and fertilizer use), it would make sense to increase the awareness of as many local residents as possible in order to gain their commitments to becoming part of the solution. In addition to behavioral changes, e.g. riding the bus, scooping the poop, etc., citizen support of the overall goals and specific sub-programs of the Storm Water Management Program are necessary to ensure future funding and political support on a local level. Local involvement is also essential in establishing priorities, keeping the SWMP aligned with those priorities, and providing forums for citizen inclusion in decision-making.

There are several links to other elements of this permit that require some form of public education. These include New Development and Significant Redevelopment; Pesticides, Herbicides, and Fertilizers; Illicit Discharge and Improper Disposal; Industrial and High Risk Facilities; and Construction Site Runoff. In addition to these focus areas, the MOA has been supportive of local, grass-roots organizations that provide opportunities for watershed learning and action and has been active in forging partnerships with several local organizations on projects which support the interests of both parties, some of whom are the Anchorage Waterways Council, Alaska Center for the Environment Potter Marsh Watershed Group, and the National Wildlife Federation Wetlands Watch.

Watershed groups are beginning to take shape; they are at various stages of development in the Campbell Creek Watershed, the Chester Creek Watershed, the Potter Marsh Watershed, and the Ship Creek Watershed. The impetus for these forums has been varied, some initiated by the MOA and one with true grass-roots origins. Nonetheless, each has been growing and establishing connections within the community as well as with resource agencies and other affected parties with varied, and occasionally, conflicting, interests.

EPA is supportive of watershed coalitions with representation from local, state, and federal agencies, local interest groups, businesses, and individual citizens. The success of watershed decision-making is dependent on citizen integration to watershed planning and management. Decisions that will ultimately impact local residents must encourage the design of a process that seeks and values citizen contributions in the plenary stages. Responsibility lies with the permittees to translate scientific data to easily understood narratives and graphics so that informed decisions are reached, and to maintain a concerted level of public education and involvement. Formation of a technical advisory board will help to instill a degree of consistency across watershed boundaries. EPA is looking to the MOA to be a leader in facilitation of public opportunities, to provide education, forums for discussion, and inclusion in decision-making. Leveraging the limited resources is encouraged. EPA is not expecting the MOA to dictate decisions or priorities to local groups or citizens on watershed or development issues.

### **13. STORM WATER MANAGEMENT PROGRAM COMPLIANCE.**

Compliance with Part II.A. of the permit will be accomplished by the implementation of, and compliance with, the described activities of the various elements of the SWMP, according to the compliance schedules contained in Parts II.A. and III. of the permit. The permittee must fully implement the SWMP, except as indicated in Part II.A. and III. upon the effective date of the permit.

### **14. PERMITTEE'S LEGAL AUTHORITY.**

The permittees are required to have the legal authority necessary to successfully enforce, implement, and complete the various activities described in the permit and SWMP. The Municipality passed ordinance 94-113 amending Anchorage Code 15.40 on July 26, 1994 to provide for adequate legal authority with regard to the following requirements: control the contribution of pollutants to, and quality of storm water from industrial sites contributing to the MS4; prohibit illicit discharges to the storm sewer system; control spills, dumping, or improper disposal to the storm sewer system; require compliance with ordinances; and perform site inspections and monitoring.

### **15. PERMITTEES' RESOURCES.**

Part II.D. of the permit requires permittees to provide adequate support capabilities to implement their activities under the SWMP. Compliance with Part II.D. will be demonstrated by the permittee's ability to fully implement the SWMP, monitoring programs, and other permit requirements. The permit does not require specific funding or staffing levels, thus providing the permittees with the flexibility and incentive to adopt the most efficient methods to comply with permit requirements.

## **16. TYPE AND QUANTITY OF POLLUTANTS DISCHARGED.**

Water quality data were collected by the permittees during the permit application process. Results from storm event monitoring in three representative study basins were used in estimation of annual pollutant loads in the EPA Storm Water Management Model (SWMM). The drainage basins approved for sampling by the permittees were: Wrangell/Industrial (97 acres, 75% industrial, 25% commercial), Benson/Commercial (127 acres, 85% commercial, 10% urban residential, 5% undeveloped), and Huffman/Rural Residential (97 acres, 20% rural residential, 80% undeveloped). Samples of storm water were obtained in manholes and culverts prior to discharge to the streams. When compared to undeveloped land and the Huffman residential basin, estimates of event mean concentrations (EMC's) revealed higher loading levels of total suspended solids in the commercial basin and higher levels of cadmium, copper, lead, and zinc in the commercial and industrial basins. The permittees encountered several difficulties in obtaining water quality samples during storm events which included volcanic eruption of Mount Spurr, low intensity fall rainfalls, and abnormally cool temperatures allowing only one or two sampling events in the representative study basins. In addition, it was reported that ash and road construction in the Benson/Commercial area may have contributed to atypical results. In light of this, it should be noted that the SWMM model was employed with minimal water quality data and provides merely an estimate of loading levels which cannot be construed as "representative." It is expected that more accurate estimates of the type and quantity of pollutants discharged will result from the monitoring program during the permit term. Evaluations of street sediment and particulates undertaken by the Municipality in 1996 have drawn attention to the loading levels of particulates and associated pollutants typically adsorbed to them, such as heavy metals and hydrocarbons. Assessments will help define the nature of the sediment and suggest strategies to reduce the loading levels to the maximum extent practicable.

In-stream monitoring will be taking place during the permit term on four streams: Campbell Creek, Chester Creek, Rabbit Creek, and Ship Creek. Permanent stations will be established at downstream locations to collect water quality data representative of the cumulative upstream impacts. Data from these stations will be collected in years two and four of the permit term and used as a screening tool; results will be a precursor to further investigation if pollutants are detected at levels indicative of a discharge or storm water impact. Approximately twelve baseflow and storm events will be monitored during each cycle. Previous in-stream and outfall monitoring has detected levels of fecal coliform above state water quality standards in some drainages, typically during the summer months. The permittees will continue to implement BMP's to eliminate human sources of fecal coliform from entering and discharging from the MS4; sampling will assist in measurement of this parameter.

In addition, macroinvertebrate monitoring will be occurring on these waterbodies as well as other selected streams to assess storm water related impacts from increasing development and construction activities and aid in establishing in-stream water quality trends.

## **17. MONITORING AND REPORTING.**

- a. Reports Required: Permittees are required (40 CFR 122.42(c)(1)) to contribute to the preparation of an annual system-wide report including status of implementing the SWMP; proposed changes to the SWMPs; revisions, if necessary, to the assessments of controls and the fiscal analysis reported in the permit application; a summary of the data, including monitoring data, that is accumulated throughout the reporting year; annual expenditures and the budget for the year following each annual report; a summary describing the number and nature of enforcement actions, inspections, and public education programs; and identification of water quality improvements or degradation. The permittees are required to do annual evaluations on the effectiveness of the SWMP, and institute or propose modifications necessary to meet the overall permit standard of reducing the discharge of pollutants to the maximum extent practicable. With the exception of the fiscal reports, details and schedules of all other required reports are described in the body of the permit.
- b. Monitoring: The permittee is required (40 CFR 122.26(d)(2)(iii)(C) and (D)) to monitor the MS4 to provide data necessary to assess the effectiveness and adequacy of SWMP control measures; estimate annual cumulative pollutant loadings from the MS4; estimate event mean concentrations and seasonal pollutants in discharges from the MS4; identify and prioritize portions of the MS4 requiring additional controls, and identify water quality improvements or degradation. The permittees are responsible for

conducting any additional monitoring necessary to accurately characterize the quality and quantity of pollutants discharged from the MS4.

Due to the variability of storm water discharges, the cost of the monitoring program needs to be balanced with the monitoring objectives and the more important goal of actually implementing controls that will directly affect the quality of the storm water discharged. However, EPA will make future permitting decisions based on the monitoring data collected during the permit term. The public will also be looking for evidence of pollutant reductions. Where the required permit term monitoring does not show pollutant reductions, EPA may impose additional limitations in the next permit. The types of monitoring are required by the permit are as follows: (1) Structural and Source Control Assessments, (2) Watershed Mapping, (3) Sand and Deicer Impacts Analyses, (4) Pesticides, Herbicides, and Fertilizer Screening, (5) Illicit Discharge Screening, (6) Chemical analysis in four priority watersheds, and (7) Macroinvertebrate monitoring in seven watersheds.

#### **18. PERMIT MODIFICATIONS.**

a. Modifications to the Permit. All modifications to the permit shall be made in accordance with 40 CFR 122.26, 122.63, and 124.5. The permit may be modified during the life of the permit to address:

1. changes in the State's Water Quality Management Plan, including Water Quality Standards;
2. changes in State of Federal statutes or regulations;
3. adding a new permittee who is the owner or operator of a portion of the MS4;
4. changes in portions of the Storm Water Management Program that are considered permit conditions; or
5. other modifications deemed necessary by the Regional Administrator to meet the requirements of the Act.

b. Modifications of the Storm Water Management Program (SWMP). Only those portions of the Storm Water Management Program specifically required as permit conditions shall be subject to the modification requirements of 40 CFR 122.62, 122.63, and 124.5. Addition of the following components, controls, or requirements by Permittees shall be considered minor changes to the SWMP and not modifications to the permit: replacement of an ineffective or infeasible BMP, implementing a requirement of the SWMP with an alternate BMP expected to achieve the goals of the original BMP, and changes required as a result of schedules contained in Part III of this permit.

#### **19. CONSIDERATIONS UNDER FEDERAL LAW.**

The discharge which is being controlled by the terms of this permit is the result of natural precipitation, and as such would continue to be discharged regardless of the state and federal action represented here. The terms of this permit do require that the permittees minimize or reduce to the maximum extent practicable the pollutants in the storm water runoff from the MS4. Consultation with the National Marine Fisheries and U.S. Fish & Wildlife revealed no listed endangered species residing within the municipal boundaries and it is therefore determined that this permit will not affect any listed endangered or threatened species, and/or critical habitat.

Based on the information provided to date no sites listed or eligible for listing in the National Historic Register will be Affected by proposed activities to reduce pollutants in the permittees' natural runoff. The applications for this permit were forwarded to the Alaska State Historical Preservation Officer (SHPO) for comment. No comments were received. Part IV. F. of the draft permit requires the permittees to provide information to the SHPO thirty days prior to commencing earth disturbing activities. The requirement to submit information on plans for future earth disturbing is not intended for activities such as maintenance and private development construction projects.

#### **20. STATE CERTIFICATION OF THE DRAFT PERMIT.**

Concurrently with Public Notice of today's draft permit, the EPA is formally requesting State Certification of the permit, as required by Section 401(a)(1) of the Act, and 40 CFR 124.53. The final permit will contain any condition required by the ADEC as a condition for Certification.